

Amendments To The Claims:

Please amend the claims as shown. Applicant reserves the right to pursue any cancelled claims at a later date.

1.-14. (canceled)

15. (new) A device for the temporal expansion or compression of a sequence of audio samples in a data transmission network, comprising:

an input for receiving the sequence of samples of a signal;

a memory unit operatively connected to the input stores the samples;

a control unit that cyclically controls the temporal expansion or compression based on a conversion factor specifying a number of samples to delay;

a working cycle having a predetermined number of working steps for processing a sub-sequence of the sequence of samples;

a delay unit operatively connected to the input memory, the delay unit references the sample to be processed in one of the number of working steps, determines a delayed sample from the memory unit that has been delayed by the number of samples to delay in comparison to the sample to be processed;

a filter unit, comprising:

a first multiplication unit operatively connected to an output of the memory unit and to a first coefficient unit providing a first coefficient in accordance to a first coefficient function, the first multiplication unit providing an output of the product of the output of the memory unit and the first coefficient, and

a second multiplication unit operatively connected to an output of the delay unit and to a second coefficient unit providing a second coefficient in accordance to a second coefficient function, the second multiplication unit providing an output of the product of the output of the delay unit and the second coefficient; and

a merge unit merging the outputs of the first and second multiplication units, wherein the first and second coefficients have a value between zero and one.

16. (new) The device according to claim 15, wherein the first and second coefficient changing in time and wherein the square of the first coefficient plus the square of the second coefficient equals one.

17. (new) The device according to claim 16, wherein the first coefficient starts with 1 at the beginning of the working cycle and changing in accordance to the first coefficient function wherein first coefficient changing linearly or in accordance with a sigmoid function.

18. (new) The device according to claim 16, further comprising a time-variant attenuator filter connected down stream from the merge unit.

19. (new) The device according to claim 18, wherein at least six audio units of approximately 30 ms are processed in a working cycle.

20. (new) The device according to claim 15, wherein the sub-sequences including at least fifty eight percent of all the samples of a sequence.

21. (new) The device according to claim 15, wherein the processed sub-sequences including less than half of all the samples of a sequence.

22. (new) The device according to claim 15, further comprising:
an additional delay unit operatively connected to the input memory, the additional delay unit determining a delayed sample twice that of the first delay unit, and
an additional multiplication unit operatively connected to an output of the additional delay unit and to an additional coefficient unit providing an additional coefficient in accordance to a additional coefficient function, the additional multiplication unit providing an output of the product of the output of the additional delay unit and the additional coefficient,
wherein the merge unit merging the outputs of the first, second, and additional multiplication units.

23. (new) The device according to claim 22, wherein the second coefficient function equals a second auxiliary function minus the product of a third auxiliary function and the first coefficient function, and wherein the additional coefficient function equals the product of the negative of the second auxiliary function and the third auxiliary function.

24. (new) The device according to claim 22, wherein the sum of the first, second and additional coefficient functions is equal to one.

25. (new) The device according to claim 24, wherein the additional processing unit contains an all-pass with the following transmission function

$$H = (z^{-N} + \gamma) / (1 + \gamma * z^{-N}),$$

where H is the transmission function and γ determining a delay and γ has the value 0.5 or a value greater than 0.5.

26. (new) The device according to claim 15, wherein the expansion or the compression is less than 20 percent.

27. (new) A method for the temporal compression or expansion of a audio sequence of samples, comprising

specifying a working cycle that contains a predetermined number of working steps;
specifying a sub-sequence of the sequence of samples for a working cycle;
generating during the working cycle a time-staggered sub-sequence that is time-staggered to the sub-sequence of samples; and
merging during the working cycle the sub-sequence with the time-staggered sub-sequence.

28. (new) The method according to claim 27, wherein prior to merging the sub-sequence and the time-staggered subsequence the sub-sequence is filtered and/or the time-staggered sub-sequence is filtered.

29. (new) The method according to claim 28, wherein the filter includes a first coefficient function and a second coefficient function, the coefficient functions changing over time in accordance with a linear function or a sigmoid function.

30. (new) The method according to claim 28, wherein the square of the first coefficient function plus the square of the second coefficient function equals 1.

31. (new) The method according to claim 29, further comprising:
generating an additional time-staggered sub-sequence, and

providing a third coefficient function changing over time in accordance with a linear function or a sigmoid function,

wherein merging during the working cycle the sub-sequence with the time-staggered sub-sequence includes merging the additional time-staggered sub-sequence.

32. (new) The method according to claim 27, wherein the subsection includes less than one third of the working steps of a working cycle.

33. (new) The method according to claim 27, wherein the method is associated with a device selected from the group consisting of a receiver unit of a data transmission network, a transmitter unit of a data transmission network, a music reproducing device, a dictating machine, a voice output unit and combinations thereof.